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OPINION AND COMMENT

Anyone Can Write Letters!

Sales of Merchandise and the Implied Warranties

An Evaluation of Socialism — II

Ration Banking

Comments on Quality Control

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OPINION AND COMMENT

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CONTENTS

This publication of the Bureau of Economic and Business Research is issued upon the assumption that our readers will appreciate interpretative comments on topics of current interest. Because studied opinions on the significance of current trends are often more thought-provoking than tabulations of data would be, the Bureau supplements its research by issuing *Opinion and Comment* as another type of service.

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Anyone Can Write Letters!

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"Anyone with ordinary common sense can write letters!" With that blasé attitude, business for years has tossed the important job of letter writing to Tom, Dick, or Harry — often the poorest prepared person in the office. In small offices the task frequently falls to anyone who happens to be able to type.

Ponderously the elected grinds out the routine "Your recent letter received and in reply will say —" all the time thinking that he is imitating business style, or at least company style. "Business letters must be formal — success is judged by how well personality is hidden" becomes his goal. Too often letters are taken as a challenge and are answered defiantly as in a debate rebuttal, leaving only the writer thoroughly pleased. Occasionally the fact that he has a secretary sets up an importance complex in the mind of the dictator and he parades his feeble style for her admiring pencil. After a time, the very volume of mail handled gives to the correspondent such a false sense of ability that he spurns mere simple rules.

Unfortunately, common sense is not ordinary nor is it sufficient for the modern correspondent. He is handling a phase of business that costs millions of dollars. The average dictated letter costs from 35 cents to 45 cents, which soon pushes the expense total skyward. Did someone say that figure was too high? All right, let's do some estimating. You know how many letters are usually written each day or week. Now allocate the salaries of the dictators, the stenographers, the file clerks, the mail boys, the messengers, the mail sorters. Add the cost of letterheads, envelopes, special printing, carbon paper, file copies. Then there is the equipment item: typewriters, ribbons, stenographers' supplies, dictating machines and cylinders, furniture, mailing appliances. Of course there is the direct cost of stamps and affixing machines. Since the correspondence work requires space, allocate additional funds to cover extra rent, light and power, fuel, taxes, and insurance. Perhaps part of the salaries of supervising executives belongs here. And of course there is always a little waste — spoiled stationery, lost stamps, and returned mail. Some of these are small items in themselves, but when added, subtracted, and divided they make the letter cost of 35 cents to 45 cents come to life.

But although the financial argument for making each letter carry its full load is potent, it is not so important as the final results achieved. The crux of the matter is how well it does its job with the customer. The correspondent is really the point of contact between the company and the customer. When a correspondent wrote a cus-

tomer, "Keep your shirt on. Other people want our products, too," he *was* the company, and it took a high-paid man almost three years to get that customer back into the fold. No matter how much fairness and altruism permeates the management, the customer judges only by his own contacts, which are usually letters.

A petulant, cold, we-attitude, or domineering letter has ended many a happy business relationship. Even a careless word or phrase may be enough to damn an entire letter. To ask an enthusiast whether he "tinkers" with radios will ruffle his pride in achievement and send him to a shop where his ability is recognized.

Most correspondents are relatively harmless in real life, but with a typewriter they often become caged ogres, writing fussy little notes beginning:

We cannot understand why you haven't answered.

We know you are honest, *but*—(or however).

Your *complaint* has been received. We are *sorry* that you *failed* to *cooperate* by keeping the machine oiled.

Surely you do not expect a *donation* of that $6.80.

Of course, it is *entirely out of the question* to send the information.

Because all these thoughtless, negative expressions indicate that the reader is at fault, they will cause the adrenalin to flow until he sputters in rage, and there can be no meeting of minds under favorable conditions. Obviously the correspondent deals with the subtlest of intangibles—the human mind—and he seeks to influence it by using a tricky medium — language. With such complexities, perhaps it is equally obvious that "everyone cannot write letters," and that those who can usually require training and constant study. Perhaps no one with a bad stomach, no one who thinks everyone is out to gyp him, and no one who cannot see the comedy in human life should attempt to represent his company on paper.

Good letter writing is primarily a problem in adaptation — adapting ideas, organization, and diction to the individual reader and situation. To analyze all these in detail is not within the scope of this discussion. But to point out the necessity for specific adaptation to people, to products, and to conditions may suggest in passing some of the answers to organization and diction.

If money permitted, movie scenes would offer the best way to teach correspondents the principles of adaptation. Let them see and hear the reactions in the office when an incomplete order arrives. Watch the customer's face as he reads the letter that accuses him of being too dumb to oil the machine properly. Peep around the corner and view bitter disappointment while the family — father, mother, and children —enthusiastically open a box, only to find the wrong merchandise, or to find it broken. Present on the screen the inquirer who asked for information and reads a curt rebuff indicating that he had no business asking for it. See the relief and pleasure of the customer who reads the first sentence of a letter granting his requested adjustment. Go into homes and show dozens of these

human interest scenes, because these letters are intricately bound up with the lives of human beings.

No correspondent with ability and imagination enough to represent a company could handle new situations without remembering those scenes, and it would be a poor dolt indeed who would not try to adapt his letter to meet those reactions — who would not change his creed from "Business is Business," to "Business is Human." He would follow Professor George Burton Hotchkiss' definition of Business English, "It isn't a language, it is a point of view." When the point of view — adaptation to the reader — is firmly established, he will find that many of the minor problems of organization and diction will solve themselves.

Instead of beginning with, "We received your letter of August 10. We are very glad to give you the information requested," the correspondent would try to wipe the anxiety from the face of his reader with a first sentence such as, "Our Model 4A portable schoolhouse, seating 100 pupils, will care for your overflow now and probably for the future." He can hear the reader breathe a sigh of relief and say, "That is just what I want," while he continues reading from a favorable point of view. In the process of saying first what the reader wants most to hear, the writer has not only adapted his ideas and his style to the needs of the customer, but by forgetting self he has automatically abandoned the old-fashioned, rubber-stamped beginning and has streamlined his approach, thus gaining directness, vividness, and economy.

Adaptation to the reader's interest alone changes the negative, we-attitude idea, "Two per cent will be added if your bill is not paid by the tenth of the month," to the positive, you-attitude, "You may deduct two per cent if this bill is paid before the tenth of the month," thus holding before the horse the more effective ear of corn rather than using the penalty whip.

Moreover, emphasis is gained by sincere adaptation to the reader's interest. "We are in receipt of your letter of July 20 enclosing your annual report for which we thank you" selfishly exults over finally getting the report in our clutches, and merely says "thank you" as an afterthought in a subordinate clause. With the proper picture in the writer's mind, he would look at the reader, realize that he would like a pat on the back for a job completed, and immediately say, "Thank you for the annual report in your letter of July 20."

To the man who complains when he does not get a free booklet which as a result of his illegible writing was sent to the wrong town, the correspondent may begin with a defensive explanation. But if he has absorbed the "you-attitude," he will greet the reader with something like this: "A second copy of your Blank booklet has just been mailed special delivery." Now the customer knows immediately that he is getting what he wants; the "second copy" indicates that the first request was not ignored and causes him to suspend judgment until he can read the facts; the "special delivery" begins to establish the promptness idea

that the writer will undoubtedly emphasize in the last paragraph because this customer, who has had difficulty getting a simple booklet, will have to be convinced that merchandise ordered will reach him before he leaves for his vacation. After this positive presentation of what the company *can do,* the writer can back up with comparative safety and in the less important second paragraph explain succinctly what was *not done.* Incidentally, the writer who has studied the psychological adaptation of unpleasant news will not only refuse to lead with it, but, after making his explanation complete and clear, will not follow his natural inclination to return to it in the last paragraph, thus ending on the most unpleasant note in the entire letter.

Adjustment letters, especially those in which the claim is not granted, need careful adaptation because they deal with people who are in uncertain emotional states. All the principles of attention, conviction, and action are present but they are focused *against* the writer. Something unpleasant has happened. In viewing the scene, the dictator realizes that he cannot erase the picture entirely, but he can adapt to the situation by seeking to implant a new, more pleasant picture, such as something that the company can do, and to focus attention on it. Again he emphasizes what the company *can do* instead of what it *can not do,* and he handles the pleasant before the unpleasant. He follows another principle of adaptation by writing in detail, which means a fairly long letter so that the reader will feel that adequate attention has been given to his complaint, thus salving his ego. Even the sentences are adapted by being longer and hence more soothing than the short, staccato sentences of quick, pleasant news.

Business letter writing is purposive composition. Letters are not written for the sake of letters, as is the case in art for art's sake, or song for song's sake,—wholly for the joy of performance. As Charles A. Beard says: "Some ends, clear or sublimated, lurk in all discussion of human affairs above the level of gossip and babble."[1] The purpose of a letter is evident, but to achieve that end one must adapt to the emotions and intelligence and experience of the reader. This is no easy task, for people's backgrounds are widely divergent, and to adapt to our compatriots may require almost as much study as to adapt to a foreign people. Unfortunately the psychology of writing in business is scantily studied. Only a few companies provide training and supervision for their correspondents. Some of these correspondence supervisors are doing an excellent job, and the correspondents, when they realize the importance of the work, are ready to work for improvement.

Since everyone speaks a common language (this may be debatable!) the attitude persists that "anyone can write a letter." But the United States is a big country, and there are innumerable differences in sectional, racial, occupational, and class likes and dislikes that require con-

[1] *The Discussion of Human Affairs,* p. 12.

tant study if letters are to be effective. Therefore, the need for adaptation of various kinds is as essential as in writing to foreign countries. Obviously a correspondent writing to Latin America will spend much time studying: first, the language, second, business organization and methods, and third, the psychology of the Latin American businessman.

Much failure in Latin American business relations can be traced to our lack of study and of adaptation to another culture. We write to businessmen in those countries as to our own people, although their psychology is vastly different and requires a big dose of our theme-song —adaptation.

A concrete illustration of this point is found in an incident reported in the *K V P Philosopher*.[2] A Michigan firm cabled a Cuban customer, "Quotation eighteenth best can do." That seems a perfectly clear, well-worded message. Hundreds like it are exchanged in this country every day. But to the Cuban it was almost as insulting as if he had been called names. The cable was reworded to read, "Regret very much that increasing cost of materials makes better quotation impossible." "But what is the difference?" you ask. "The first said the same thing and took fewer words. It costs money to cable." The answer is adaptation.

Here is the Cuban's reply: "I must show this cable to my customer. Had I shown him the first one, he would have thrown me out of his office. You see, we folks down here pride ourselves on being gentlemen before we are businessmen. We are almost as flowery as the Chinese in matters of courtesy. In every simple conversation, we do what you Americans call 'spreading the oil.' We say 'please' in a hundred different ways, and 'thank you' in a hundred more.

"Take that wire, for example. We know that American mill quoted us its best price the first time. Americans, on the whole, are one-price outfits. Down here, we bargain. But even when we know that the quoted price is the best we can hope for, we still want you at least to pretend you are sorry you can't do better. We want you to give some reason, too.

"When I get the reworded cable, I can take it to my customer and say, 'Look, Mr. Machado, I have done the best I can for you, but as you can see, these people have mounting costs and consequently are extremely sorry they cannot give us lower prices.'

"I tell you honestly, most Latin Americans will pay higher prices to a supplier who understands the language of courtesy than to another who has the same goods for less money but offers them on a 'take it or leave it' basis."

Considerable adaptation in letters is going to be necessary to implement the Good Neighbor policy in business. United States standards will not suffice, just as New England standards will not suffice in the Deep South. These prospective new customers have different emotions and reactions, and in order to adapt our

[2]Kalamazoo Vegetable Parchment Co., Vol. 9, No. 12, pp. 3-5.

game to the new rules we shall have to make a thorough and systematic study of those rules.

Adaptation to the reader, whether foreign or domestic, leads to that intangible quality in letters known as personality. The man in the drawing room who talks fluently on subjects of interest to his listeners is said to have a "pleasing personality." The letter whose tone, diction, and content are adapted to the reader is also said to have "personality," which is usually a synonym for "effectiveness." A good letter presents a picture of the writer which is better than a photograph because it shows vividly his mental processes. A man's background, English, knowledge of human nature, and observance of business principles stand out in bold relief when reduced to words and sentences. The letter becomes an index rather than a cloak to his personality.

Often we hear the slogan, "Write as you talk." Like all slogans, this should not be taken too literally. It is designed to focus attention on naturalness of expression, which is desirable, but little conversation is effective when reduced verbatim to writing. Actual conversation usually moves slowly—even crab-wise—is full of interruptions and false probings. The speaker's "I mean" is the signal for repetition. Good writing has certain qualities that make it better than most conversation in that it is more concise and direct and saves the time of the reader. A twenty to thirty minute conversation can readily be reduced to three to five minutes of reading. Modern letters should combine the *ease* of conversation with the *precision* of business, giving a tone that might be called *formally conversational.*

Adaptation to people and products is often influenced by economic and political conditions, which today are those of conflict. War means orders, regimentation, and dictatorial tone. Under its pressure, many correspondents are intolerant of others' opinions and reactions, and see no need of persuasion, even enough to make palatable a bitter message. But the man who has been trained in the psychology of letters will realize that the customer has been pushed around constantly these days—told that he can't have this and he can't have that. In imperious language he has been told that "economic disturbances have made it impossible to supply merchandise" when he wants to know in words of one syllable adapted to him *why* he can't get the gadget now, *when* he can get it, or *whether* there is a satisfactory substitute.

Recently a local merchant received a letter from a company explaining in considerable detail why it could not fill his order. By most standards, it was a good letter—thorough and considerate. *But* it was a form letter with a bad fill-in. This dealer had been an old customer—in fact was one of the first customers of this manufacturer. His pride was hurt by receiving a form letter from that company. As he said, "They needn't have written all those reasons, but at least they could have sent me a personal letter." Doubtless the company had many such letters to write and it was economical to prepare a

orm letter (although the sloppy ill-in was inexcusable) but the adaptation to this old, preferred customer was definitely bad.

Wartime letters are adapted to many new uses. They are called upon to replace salesmen who are no longer available or who cannot get the gasoline to travel. Companies that now have nothing to sell write letters discussing service, repairs, substitutes, general war work, and future plans, partly to help customers keep in business and partly to keep in touch with them. In 1918, many companies forgot to maintain their customer contacts, and after the war found that the customers had forgotten them. The best post-war planning is to do something right now.

Some companies must adapt to new war products sold in new war markets. Others promote more efficient use of goods and services, explain shortages and price increases, emphasize long-term values—and send regular letters to employees in the service.

Important in adapting to the changed human factors is the need to educate new classes of buyers who have the money to buy in a new stratum, to cater to more women who have increased their buying power through war jobs, and to deal with people who have developed hair-trigger tempers because of tension and overwork.

Perhaps all this suggests that adapting the business message to people, products, and conditions requires more than a typist. Not just anyone can write good letters. But almost anyone *can* improve. Unfortunately neither business nor the school has developed an effective system of testing correspondents before placing them in the important position of talking directly to the customer. Although some companies have developed excellent training courses for correspondents already selected, there is considerable lost motion because many of the trainees never should have been chosen. If some personnel man will construct an adequate test to use in hiring future correspondents, he will serve business by changing "Maybe this fellow can write letters" to "Here is a person qualified to talk to our customers."

And when that person is selected you may be sure that he will be capable of learning and using the principles of adaptation. He will realize that business writing is democratic writing—writing that recognizes the dignity and worth of the individual, and that wields a strong social weapon. He will write to his customers as human beings and not as names on the mailing list. He will study their likes and dislikes, their needs and wishes, and adapt his message to them. And in so doing he will broaden his own life, enlarge his sphere of influence, and become a better citizen, father, friend, and neighbor. He will use the you-attitude in ever-widening circles.

As Arnold Bennett said, in discussing the power to put oneself in the place of another, "The faculty will grow just as a muscle will grow; also it will wither as a muscle will wither; and for the same reason."[3]

[3] *How to Make the Best of Life,* p. 36.

Sales of Merchandise and the Implied Warranties

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During a war period, such as we are experiencing, numerous substitute products are being offered for sale. Critical materials being excluded from production for civilian consumption, substitute materials are taking their place. Some of the substitutes are the result of a long period of careful research in the laboratory, but others are thrown upon the market without adequate consideration of their limitations. In addition, with the advent of rationing, the black market has appeared. Sales by persons not expected to sell, sales in excess of quotas, and sales to persons thought to be restricted in their buying are receiving considerable attention at the hands of newspapers and government officials. Furthermore, some of the substitute items are being produced and many of the black-market products are being processed by concerns with little or no previous experience and in many cases with very limited financial backing to support their venture or to protect their customers. The problem is further accentuated by the shortage of experienced labor in the plants. Because of certain dangers inherent in this situation which confront the retailer and the consumer, it seems quite appropriate to review carefully the risks taken by the retailer in selling commodities of the nature mentioned. If he is fully conversant with his liability to the consumer which would result from the sale of defective merchandise, he is forewarned of possible risks and, if he so desires, can protect himself through some form of insurance contract or can refuse to sell questionable merchandise.

The liability of the seller to the consumer for injuries sustained by reason of defective goods is founded primarily upon the implied warranties which accompany all sales of personal property. Occasionally added protection is given to the buyer if he can establish the carelessness of the seller, but it is the purpose of the writer to consider primarily the warranties and to give but scant consideration to problems resulting from negligence.

In order to get a definite problem upon which to focus our attention when considering the warranties, let us assume the following situation. Mrs. X called the meat market and ordered a certain cut of beef, but because of improper treatment at time of slaughtering, the meat supplied was unfit for human consumption. This fact was unknown to the retailer and unsuspected by the consumer. The result was illness of

the wife, her husband, a minor child, and a guest who chanced to be dining with them.

Under our common law, the courts to some degree protected the public in such cases, but left many problems unsettled. As a result, leaders in the legal profession proposed a Uniform Sales Act which has been adopted in many states, including Illinois. Section Fifteen of that act relates to the warranties which are implied in the sale of merchandise, and reads as follows:

"Subject to the provisions of this act and of any statute in that behalf, there is no implied warranty or condition as to the quality or fitness for any particular purpose of goods supplied under a contract to sell or of sale, except as follows:

1. "Where the buyer, expressly or by implication, makes known to the seller the particular purpose for which the goods are acquired, and it appears that the buyer relies on the seller's skill or judgment . . . there is an implied warranty that the goods shall be reasonably fit for such purpose.

2. "Where the goods are bought by description from a seller who deals in goods of that description . . . there is an implied warranty that the goods shall be of merchantable quality.

3. "If the buyer has examined the goods, there is no implied warranty as regards defects which such examination ought to have revealed.

4. "In the case of a contract to sell or a sale of a specified article under its patent or other trade name, there is no implied warranty as to its fitness for any particular purpose.

5. "An implied warranty or condition as to quality or fitness for a particular purpose may be annexed by the usages of the trade.

6. "An express warranty or condition does not negative a warranty or condition implied under this act unless inconsistent therewith."

Explanation of Warranties

Those charged with the responsibility for organizing and adopting the Uniform Sales Act have taken it for granted that the economic well-being of our country is best served in most instances by imposing upon the seller the risk of loss incident to the sale of defective merchandise. This appears to be true even though the seller does not produce or process the goods, is totally unaware of the defect, and has no reasonable way of knowing that the defect exists. Thus even in the sale of canned goods or bottled beverages, the warranties apply. The retailer's protection is found in recovery back from the jobber or processor who sold him the goods. Ultimately the loss should revert to the person responsible for the defect, provided he is financially able to bear it.

With this general principle in mind to guide us, we are now in a position to consider the various sections of the law as they relate to our illustrative problem or such other situations as our thinking creates. The first section of the act merely suggests that the seller of goods does not warrant the ordinary article sold to be fit for some particular or unusual purpose which the buyer has in mind. However, should the buyer disclose that purpose to the seller and rely upon the latter's judgment in making the selection, there arises the implied warranty of fitness for the purpose disclosed.

Thus, the seller of beef makes no warranty that it is fit to serve raw or particularly adaptable to cooking over an open fire unless he has been informed of the purpose and suggests something to meet the particular need. If the buyer clearly relies upon the judgment of the seller, however, and the product fails to meet the objective outlined by the buyer, the seller is liable for breach of the implied warranty of "fitness."

Section Four further limits the application of the warranty just discussed through providing that a sale under a patent or trade name carries no implied warranty of fitness for a particular purpose. It should be obvious in such cases that the buyer is not relying upon the judgment of the seller but rather is influenced by the general qualities of the article advertised under its patent or trade name. Let us assume that a buyer orders a peck of Early Ohio potatoes, but tells the seller that he expects to bake them. It is clear in such a case that the seller makes no warranty of "fitness" for baking, since the buyer did not rely upon the former's judgment. He made his own selection when he ordered Early Ohio potatoes. This does not mean that the seller is free to sell potatoes that are rotten or unmerchantable, however.

The law provides that a regular dealer in goods warrants that they are merchantable, provided they are purchased by description. The exact meaning of merchantability is still undetermined, but two prevalent concepts should help us in determining the issue in most cases. One line of court decisions implies that an article is merchantable provided it is reasonably satisfactory or meets, with a fair degree of success, the general purpose for which it was produced. If it compares favorably with other articles of the same nature in satisfying their objective, it is satisfactory. Thus, a hog feeder made out of some new material would be merchantable if it functioned reasonably well in comparison with other hog feeders. Likewise, hemp seed, under the above test, would be merchantable if germination tests showed that it compared favorably in germination with that of other sellers and contained no more obnoxious weed seed than was found in hemp seed generally.

A second concept of merchantability, somewhat more illuminating and easier of application, is suggested by some of the courts. Its essence is marketability, and the chief question is: Would the article have sold at its price if all its deficiencies had been known prior to the sale? That is, if an article with certain defects or limitations known to the public would sell regularly on the market, it is merchantable. On the other hand, if advance knowledge of the deficiencies or defects would preclude the sale of the article, it is plainly not merchantable. A loaf of bread which conceals a needle, or a can of beans in which pebbles are mixed with the beans, is scarcely merchantable. The same might well be said of all foods which ultimately prove to be unfit for human consumption. The sale of such merchandise is accompanied by a breach of the warranty of merchantability, and the seller be-

comes responsible for injuries resulting from the normal use of the food.

The warranty of merchantability is applicable only to sales of goods by description. A sale by description seems to be made whenever the buyer by language or conduct makes it possible for the seller to know what the buyer wants. That thing which enables the seller to know what is to be delivered appears to be the necessary description. Goods purchased by trade name are obtained by description and must be merchantable—fit for the general purpose for which they were produced but not necessarily fit for some special purpose which the buyer has in mind. An order given over the telephone to a grocer for a pound of butter would be an offer to buy by description. So would an order for a pound of "Country Life" butter.

The most pronounced controversy over sales by description involves purchases made at self-service or semi-self-service stores. The goods are displayed on shelves, racks, and tables by the seller, with the expectation that buyers will make their selection from the merchandise exhibited. If a buyer selects a loaf of bread, a pound of coffee, some carrots, and a can of apricots and drops them into a basket, is he buying them by description? There is usually some descriptive term above the location of articles and most packaged goods are described on the package. When he presents the goods to the cashier for payment, it seems that he impliedly says, "I want a loaf of bread. This one was handy so I selected it, but any other of this make would have been equally satisfactory." If he actually used that language, it would clearly be a sale by description. A buyer should not be denied the benefit of an implied warranty in the case of defectively canned vegetables or fruits merely because he helps himself instead of having the dealer's employees take the items off the shelves. The nature of the contract does not change, but the buyer is performing a service which accommodates the seller. The courts are somewhat in conflict on the particular point, but the above seems to represent the current view. The warranty applies to sales in self-help stores.

A buyer who has had ample opportunity to inspect merchandise which he purchases, and who later discovers defects which his original inspection should readily have disclosed, has no claim because of breach of warranty. One whose loss is occasioned by his own carelessness should not be allowed to shift the responsibility for his negligence to someone else. This is true only if the defect is open and readily accessible to him. If the defect is hidden and not apparent, inspection by the buyer does not preclude him from recovering for breach of the warranty of merchantability.

Extent of Warranties

The warranties previously discussed are the result of implied terms in the contract of sale between the seller and the buyer. Although no express stipulation concerning them is made, the nature of the transaction

is such that they are implied. In general, this would seem to limit recovery for the breach of warranty to a contracting party, namely, the purchaser of the goods. Since a warranty does not run with the goods, in favor of any user, a defect which results in an injury to someone other than the purchaser creates no liability on the part of the seller.

In the light of this principle, let us consider the illustration in which the wife ordered meat and received it, unknown to her, in a state unfit for human use. The result was illness to her, the husband, a minor child, and a guest. Because of the rule indicated above, the guest, since he had no contract with the seller, would be without any remedy, unless he could establish that someone's carelessness was the approximate cause of his injury. Much the same can be said for the minor child, although, as will be seen presently, the parent will have recourse for expenses incurred because of the illness.

Since the wife effected the purchase, it should be clear that, because of the breach of warranty, she has a good course of action against the seller for such injury as was occasioned by the defective merchandise. The position of the husband is quite similar. Since he presumably supplies his wife with funds to purchase household items, the courts assume that she acts both for herself and as agent of her husband in making such purchases. As the agency relationship in reality makes the husband a contracting party, he is permitted to recover all expenses incurred by him as a result of the breach of warranty. Because of his obligation to support his family, the expenses incurred in caring for the minor child are recoverable.

From what has been said, it should be plain that recovery by the injured party is not limited to the price of the article sold. The amount of recovery is dependent upon the damages which flow more or less directly from the defect in the property sold. As indicated in a recent Illinois case, if bricks are sold for $362.50, but, after being used in the construction of a residence, peel, chip and turn white, the damages recoverable are the cost of replacing them or the reduced value of the property, even though the amount might well be $2,500 or $3,000.

Since warranties run only in favor of the buyer, it may be worth our attention to review briefly the place of negligence in the production or distribution of goods. The law in effect says that every person whose carelessness injures another must compensate for the injury so far as money damages can do so. Consequently, if the producer or his agent is careless and offers on the market an item which is a menace to human life, the person injured as a result of such negligence should be able to recover from the producer, even though the injured person was not the purchaser of the product. The result is much the same when the retailer or his agent is careless; but the wholesaler in at least one instance assumes an added responsibility. If the article sold is packed for him by the proces-

sor and is sold under the wholesaler's brand or trade name, the latter assumes responsibility for the negligence of the producer as well as for the carelessness of his own employees.

Only one additional matter demands attention in our consideration of the responsibility of the seller for the condition of the merchandise sold. A few cases have arisen in which an independent department, operating under a lease from the proprietor of a department store, has sold defective merchandise. If the department appears to the ordinary observer to be a part of the business of the store, and the advertising program includes this department as well as the others, the person injured as a result of the defective merchandise has been able to recover from the department store owner. The latter is estopped to deny that he is the seller of the merchandise, since he has led third parties by his conduct to believe that all departments are operated by him.

By way of summary, it suffices to say that a retailer who sells untried, ill-prepared, or unknown merchandise warrants in most cases that it is free from defects. Therefore, it behooves him to make certain that the processor is financially responsible. Recovery against the retailer for the sale of defective merchandise will then revert to the producer, upon whom the loss should logically fall.

Problems of Peace.—With military expenditures about ten times as much as in the first World War, and with a much larger proportion of our productive capacity devoted to military purposes, the problems of reconversion will be more difficult than they were a quarter of a century ago. Among the problems that call for early solution are the cancellation and settlement of war contracts, the disposal of surplus war materials, overhauling of the tax structure, postwar currency stabilization, and the disposal of Government-owned plants. The providing of a high level of employment in the postwar period is a challenge that must be met by private enterprise, or the Federal Government will step into the breach.
—From *New England Letter* (First National Bank of Boston), July 30, 1943.

Silver Use in 1942.—According to the American Bureau of Metal Statistics, in 1942 the consumption of silver in the United States for all purposes amounted to 193,933,000 ounces. Of this total, 78,933,000 ounces was used for coinage purposes. The remaining 115 million ounces was used in industry, 60 per cent for direct and indirect military purposes.

An Evaluation of Socialism—II*

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In considering the probable failures and weaknesses of a socialistic economy, we turn first to the matter of production on the basis of economic planning. Since, as we noted in the first article of this series, the productive system under socialism would make use of many methods and principles which are also employed in our capitalistic system, the fundamental issue in production concerns the probable effectiveness of planned control over production as compared with control by means of the market and price mechanism. In this connection we are concerned with two questions—the extent to which the planned productive results, if these results could actually be attained, would be suited to the basic needs and desires of the citizens, and the extent to which the socialistic economy could probably obtain the planned productive results. On the first of these points, we cannot blithely accept the common socialistic opinion that planned productive results could scarcely be worse than those of unplanned production. It is true, as we have seen, that planned production would have some advantages in comparison with capitalistic production, but these advantages certainly do not mean that the planned productive results will necessarily be perfectly suited to the basic needs and desires of the people, for planned production has some difficulties which are distinctly its own.

Under socialism many important economic decisions, such as those concerning the kinds and quantities of goods to be produced, the allocation of productive factors to industries and enterprises, and the distribution of productive resources as between providing for present consumption and providing for capital formation, must be made by the economic planners. And the planners cannot rely on the customary capitalistic guides of prices and costs in making these decisions, for prices and costs are not determined in the market under socialism but are in the power of the same planners, who might otherwise wish to rely on them for guidance. Under these conditions, it is usually held that the important economic decisions must be made arbitrarily rather than rationally. In connection with the allocation of productive factors to industries, for example, it is said that, if the government (representing the people) is the sole owner of productive wealth, there can be no price formation for this land and capital, hence no rational computation of costs, and hence no rational allocation of these factors to the various industries of the economy. Again, if the managers of socialistic industry have no great discretionary powers and little financial responsibility in connection with production, rational

*This is the second of two articles on this subject.

isk-bearing by these managers is ut of the question.

However, it is sometimes held that ational decision-making would not e impossible under socialism if it ere possible to simulate the results f the capitalistic pricing system ithout actually having that system. Iany writers have developed com- licated theoretical processes for chieving this result. While space ill not permit an examination of ny of these plans here, we may onclude with most economists that would be possible, at least in trict theory, for a socialistic econ- my to achieve something approach- ig rational decision-making on the asis of one of these artificial pro- edures, but that the procedures are o complicated that it is doubtful hether any economic planning gency would attempt to follow any f them in practice. It is probable iat the economic planners under ocialism would decide to make the asic economic decisions on their wn power and as best they could. hey could get help, of course, from ieir knowledge of what people in eneral have consumed in the past, nd could make adjustments on the asis of what people in good, though ot rich, circumstances have con- imed under capitalism. Further uidance could be obtained by ob- erving the reactions of the consum- rs to the initial productive results ttained by planning, by appealing irectly to the consumers to specify hat they wanted, and by making se of the opinions of experts or of dvisory bodies of consumers.

In spite of all these things, there ould remain a considerable ele- ment of arbitrariness in the deci- sions of the economic planners and they could never be certain of the qualities of their decisions. They would know, of course, that a large amount of a good is usually to be preferred to a small amount, but, having decided to produce a given quantity of a good through the use of given quantities of the produc- tive agents, they would never know whether that quantity of that good would give more or less satisfaction in relation to its cost than would the quantity of some other good which could have been produced with the same quantities of the agents of production. As the result of planning, a certain quantity of a good is offered for sale at a certain price, and the planners observe that the consumers eagerly purchase and consume it. But this would not tell the planners much, for the demand for a particular good at a particular price, when other desired goods were not available or were available only in small quantities at high prices, would be quite different from the demand for it when other goods were available in large quantities at low prices.

Again, if the planners could order the production of an economic good by either of two methods, each of which required a different combina- tion of the agents of production, they could never be sure which methods should be chosen. They might know and prefer the method which produced the greater quan- tity of product, but they could not know that this method was actually superior on the basis of cost. Or, if the planners were faced with the

choice of two methods of producing a certain good, and one method would produce a smaller amount of it rather soon whereas the other method would produce a larger amount after a considerable lapse of time, the planners would be unable to make a completely rational choice between these alternatives in the absence of a market-determined rate of interest. The planners would certainly be expected to take the time factor into consideration, but again they could never be sure of the quality of their decision. In similar fashion, they could observe whether the citizens as consumers registered satisfaction or dissatisfaction over the planned decisions with respect to saving and capital formation, and the resulting limitations on immediately available consumable goods, but the planners could never be sure just how good or bad their decisions had been on the basis of the time preference of the individual citizens.

These considerations seem to indicate that, even in the absence of certain capitalistic shortcomings in the field of production, there would be plenty of opportunity for the total results of planned production to fall short of perfection in the matter of adaptation to human needs and desires. And this is not the whole of the story, for we have thus far been assuming (1) that the planners have the best of intentions and struggle manfully to fulfill the desires of the people, and (2) that the total productive results attained are actually those which are planned. If the planners were proud in their wisdom and decided that they knew what the people wanted, or should have, better than the people themselves knew, the results of planned production might be most unsatisfactory to the citizens. Such dereliction from duty on the part of the planners would presumably be short-lived if the government of the socialistic system were truly democratic, so that the planners could be removed from office after a reasonable interval if the people were dissatisfied with the results which were produced. However, if the government of the socialistic system turned out to be a dictatorship, so that the planners were safe in their jobs so long as they pleased the dictator or a small group of party leaders, the total results of planned production might be much worse, from the point of view of the needs and desires of the people, than those produced by our capitalistic system. Hence, the question of democracy in government in the socialistic system is a very important one in connection with evaluating the probable results of planned production.

Whether or not the economic planners were responsible to the people, it could not be expected that the actual results of planned production would be precisely those which had been planned. This result would be due not so much to any lack of technical efficiency on the part of governmental enterprises under socialism as to the fact that a number of matters could not be controlled by economic planning. Even under economic planning, many phases of production would be subject to the influence of uncontrollable natural phenomena. For example, unusually favorable or unfavor-

able weather conditions would greatly affect the yield of certain crops, and indirectly the output of industries which were dependent on these crops for raw materials. Wars, or even changes in the military outlook, could cause the actual results of production to depart significantly from the planned estimates, and much the same thing would be true of technological changes if they were introduced into industry about as fast as they occurred. Finally, the economic plans would have to predict the activities of millions of human beings, and the planners could never be sure that these people would behave exactly as they were supposed to behave in various situations. In fact, if the socialistic system proved unable to furnish adequate incentives to individuals, the technical efficiency of productive activities might be considerably impaired.

All in all, it does not seem possible to predict with great accuracy just how well the total results of planned production under socialism would compare with those produced by our capitalistic system. Certainly it is difficult to see that there is any tremendous automatic advantage for socialism in this matter. Nor do the results of planned production in Soviet Russia throw any great light on the subject, because economic planning in Russia was undertaken under conditions very different from those under which it would have to be attempted in the United States. We do not wish to enter into the controversy as to whether the great backwardness of the Russian economy at the time when economic planning was begun was a great boon or a drawback from the point of view of successful planning, but at least this backwardness prevented the Russian experiences from being an entirely reliable guide to the probable experiences of other countries.

The socialistic proposition to the effect that the individual citizens should work according to their desire for compensation and receive income in accordance with the quantity and quality of work done indicates that there will be differences in wages under socialism. However, in the virtually complete absence of property incomes to be received by some individuals but not by others, it is certain that the degree of inequality in the distribution of income among individuals and families would be sharply less than that which exists in our capitalistic system. In evaluating the proposed distribution of income under socialism, we may admit that many evils which flow from extreme inequality in income distribution under capitalism would probably be eliminated under socialism, and that this result would be desirable. Moreover, the receipt of unearned incomes by individuals would be eliminated under socialism, and this result would also deserve approval. Even under capitalism, most individuals would favor the elimination of unearned incomes as a matter of general principle just as they would favor religion, but no individual under capitalism ever thinks or admits that he personally receives any unearned income. It is always the other fellow's income which is unearned.

The leading question in connection with the socialistic distribution of income is whether the proposed moderate differentials in income would be consistent with the socialists' desire to maintain and expand the total national income. That is, would the small differences in incomes which modern socialism contemplates prove adequate to provide incentives for all? If individuals under socialism would lack incentives to work efficiently, to manage enterprises and industries efficiently, and to invent, contrive, and improve machines and methods of production, the total national income might fall well below that which is produced under capitalism. It is obvious that, if the total national income were too small, it could be divided ever so fairly and equally without producing a high level of economic welfare for the people.

With wages for ordinary grades of labor paid largely on a piecework basis, it is quite possible that differences in wages at the lower end of the socialistic income scale would be just about as adequate as they are under capitalism from the point of view of providing incentives for ordinary workers. It is far less certain that the modest "upper-bracket" wages proposed by socialists would be adequate to provide incentives for the managers and directors of large-scale governmental enterprises, for inventors and research specialists, and for high-grade professional workers. The socialists obviously think that moderately large wages for such persons would work out satisfactorily, but this is a matter which can be fully decided only by experience. The socialists contend that individuals, regardless of the difficulty and responsibility of their work, would not mind being only fairly well off if there were no extremely rich individuals with whom they could compare themselves unfavorably. The socialists do not expect that individuals who have become accustomed to receiving large incomes under capitalism will ever be fully content with the smaller economic rewards available for the same work under socialism. But they expect that, as soon as a new generation comes along, composed of individuals who know nothing about the large differentials in income which had formerly prevailed under capitalism, people will work just as hard and efficiently under the small income differentials of socialism as they would under any other system of rewards. However, it is difficult to find these arguments entirely convincing.

In any case, as we know, the socialists do not intend to rely entirely on differences in wages to provide incentives for the people. They intend to reduce the importance of economic motivation as much as possible while developing other types of incentives greatly. Among the motivating forces which would be emphasized are such things as power, prestige, public honors and acclaim, pride in work, the joys of creation, extensive opportunities for education and training, jobs well fitted to individual abilities, pleasant and interesting work in advanced positions, the adoption of merit as the basis for advancement,

relief from the dangers of economic insecurity and unemployment, idealism, altruism, devotion to the cause, and ultimate compulsion and penalties.

Just how well this system of moderate differences in wages combined with a host of other incentives would work out in practice cannot be determined in advance. Fundamentally, the answer depends upon the question of whether people behave acquisitively under capitalism because selfishness and acquisitiveness are an inherent and unchanging part of their nature or whether this behavior under capitalism is produced largely by environmental and institutional conditions peculiar to that system. Of course, many people think that they know the final answer to this question, but they do not agree among themselves very well as to what the answer is. It is our contention that the answer must be obtained from experience in trying to operate a socialistic system. Here again the Russian experience has not been very helpful. The Russian economy has moderate differentials and relies on many other types of incentives, but one of its leading weaknesses to date has been low efficiency and productivity on the part of labor of all grades. Other things being equal, this result might point to some deficiency in the Russian system of incentives, but, in the case of Russia, low labor efficiency and productivity could be explained in so many other ways that this conclusion about incentives is not necessarily warranted. Quite apart from the Russian experience, however, it is obvious that, if incentives were inadequate in the socialistic economy, the socialists would have to fall back on their second line of defense—the contention that a moderate national income rather equally divided among the people would be preferable to a larger national income divided with great inequality.

There is little doubt that the planned economy of socialism would have some advantages over our capitalistic economy from the point of view of economic stability. It should be possible to keep a planned economy operating after a fashion without severe breakdowns or depressions and unemployment. If the productive results which were planned could always be attained in actual practice, there would really be no problem of economic stability under socialism, but, as we have seen, there are many factors which may cause the actual productive results of a socialistic system to diverge significantly from the planned results. Under these conditions, depressions and unemployment might be avoided but the advantages of a socialistic economy in this respect would not be nearly so great as they seem at first glance.

Consider, for example, a case mentioned in our previous article. In the economic plans, the production of coal, coke, and iron ore is coordinated with that of steel, automobiles, tractors, and machinery, but in practice one of the many things which might happen in any economy actually keeps the output of coal and iron ore from reaching anything like the planned estimates. What effect will this have on the

steel industry and other industries which require large quantities of steel? It seems clear that these industries will, at least temporarily, have some unused productive facilities and some unnecessary labor. But, say the socialists, these conditions will not be allowed to spread to other major industries, because any necessary price adjustments will be promptly made and the purchasing power of the workers in the steel industry and other industries using steel will be maintained.

This sounds good, but just what could the socialistic economy do for these workers? It could spread the work in the steel industry and other industries using steel by giving each employee shorter hours of work while maintaining wage payments as before, but something approaching this could be done even under capitalism. If, as seems more logical, some workers were temporarily displaced from the steel industry and other industries using steel, it is contended that there would be no unemployment which would contribute to depressed conditions in other industries, because the planned economy would find other jobs for the workers. This it could do because it would employ workers so long as their products were desired by consumers and not merely so long as it could make profits by using their labor. But how quickly could other jobs be found for these workers and what kinds of jobs would they be? If the workers could not be placed in other jobs quickly, the demand for the products of other industries might suffer. Moreover, it might often be necessary to reemploy the workers in jobs in which they would turn out products that, although they would be taken off the market by consumers, could not be produced on the basis of prices and costs if these prices and costs were freely determined in the market. Such sub-marginal jobs would prevent unemployment, and it would probably be better for the workers to be employed in them than to be unemployed, but the difference between giving the workers employment in sub-marginal jobs under socialism and giving them employment in raking leaves, digging holes, and mending streets under the WPA in our capitalistic system is not very great.

All this, of course, does not mean that a socialistic economy would have no advantages over a capitalistic economy in connection with economic stability. Many factors which are important in connection with business depressions and unemployment under capitalism (such as the tendency of competitive industries to overshoot the mark with regard to total quantities of productive facilities, the overexpansion of bank credit in boom periods, and the inclination of quasi monopolistic industries to take their losses, when necessary, by maintaining prices and permitting a considerable part of their facilities and workers to be unemployed, instead of by lowering prices and continuing to use their productive facilities and labor) would be eliminated or controlled under socialism. However, the fact remains that, until it is pos-

sible for planned productive results to be perfectly realized in practice, there are opportunities for grave economic maladjustments to occur under socialism. And, in the face of such maladjustments, it may be held that a socialistic economy would operate to conceal business depressions rather than to eliminate them.

Some critics of socialism contend that the old population bogey might be revived in that system, and that population might increase so greatly as to produce very serious consequences. According to this notion, population is held in check under capitalism by the desire of the citizens for economic advancement, since too many children may keep a family from "getting ahead." If a socialistic economy guaranteed jobs at "good" wages for all citizens and undertook to assure support and care for one's children as well as for oneself, families might increase in size so much that standards of living would decline substantially despite the best productive efforts. This criticism lies distinctly in the field of speculation. According to many economists the number of children in a family even under capitalism is often influenced to a considerable extent by noneconomic considerations. Moreover, in our system, the largest families are commonly found among the most wretched and miserable groups in the population. It seems quite possible, therefore, that the assurance of a satisfactory income to all workers might help to hold the population in check rather than to increase it. On the whole, then, we cannot predict that a socialistic system would definitely face a problem of overpopulation.

The political and governmental system proposed by modern socialism seems ideal from the point of view of democracy and freedom for the individual, but many questions may be raised concerning the possibility of attaining this ideal political and governmental system in practice. Great difficulties would undoubtedly be encountered in enlightening all the citizens concerning the economic and other issues with which the government would have to deal, in attempting to have the government make immediate and precise responses to the changing will of the citizenry, and in handling economic representation and other proposed features of socialistic government. However, the leading question in connection with the government under socialism has to do with whether comprehensive economic planning is consistent with political democracy. Full-fledged economic planning seems to require that enormous powers for making and enforcing decisions be centralized in a relatively small group of economic planners near the head of the system. Under capitalism, at least, governmental officials and agencies seldom seem willing to relinquish powers which have once been granted to them, and persons in high governmental positions do not always seem willing to give up these positions unless compelled to do so by the electoral process. If human nature would not be profoundly changed under socialism, there might be grounds for suspecting that the

planners would become convinced of their own omniscience as planners and that they would plan above all to keep themselves in office as planners.

Of course, the socialists are not inclined to admit that this danger is very serious. They seem to think that human nature would be so thoroughly changed under socialism that individuals who had been granted enormous powers as economic planners would cheerfully doff those powers at the end of a short period of years if their services as planners had not been satisfactory to the citizens. However, it seems to us that the psychological atmosphere under economic planning might not be favorable for the changing of plans and the admission of grave errors in planning, if these changes and admissions were likely to cost the planners their jobs. Since errors would be made and plans would have to be changed from time to time, it seems likely that the planners would try to achieve monopoly powers over their jobs. While admitting that, in theory, economic planning is compatible with democracy, we believe there is a grave danger that economic planning will be associated with dictatorship in practice. And this, of course, would be quite enough to ruin the socialistic system for most people.

The socialists admit that various economic rights which are available to the individual under capitalistic institutions would be eliminated under socialism. However, the socialists contend that these rights—such as the right of private property in productive wealth, the right of freedom of enterprise, and the right to receive extremely large economic gains as the result of exceptional personal accomplishments or the ownership of large amounts of wealth—mean comparatively little to most individuals under capitalism. The individual has these rights under capitalism from a legal point of view, but he is economically unable to take advantage of them in many cases. Under socialism, the individual would retain those rights which are most important to him under capitalism—the right to choose his own occupation out of the many available and the right to spend his money income for any commodities and services which please him.

But we may well ask whether freedom of occupational choice and freedom of consumption choice are compatible with economic planning. It is difficult to see how the individuals of any economic system could have complete freedom in both of these matters at the same time, except in that most improbable case in which the commodities and services which the individuals in the system desire to consume are precisely those economic goods which the individuals as producers desire to turn out. In the usual case, the individuals as consumers will greatly desire some commodities or services whose production is most unpleasant or risky for the workers, whereas some occupations which people would gladly accept as producers will result in commodities or services which the people as consumers do not greatly desire. Of course, some sort of adjustment is achieved under capitalism by means of the relative

prices of various commodities and services and the relative wages in various occupations, but the resulting ranges of products and of occupations are never precisely those which the people would have chosen on a physical basis.

Under socialism, there is the added complication of relating both of these freedoms to economic planning. So what the socialists probably mean by freedom of consumption choice is that the total range of commodities and services which it is deemed worth while to produce will be determined by economic planning, but that the individual consumers will be as free as possible to spend their money incomes for any commodities or services within this range. In similar fashion, the total range of occupations which it is considered desirable to carry on in the economy will be determined by economic planning, but the individual citizens as workers will have a free choice among all the occupations within the socially-approved range. Intelligent economic planning will keep the total range of commodities and services and the total range of occupations consistent with each other. Outside these planned ranges, there will be no freedom at all. No individual will be able to consume yachts or mink coats if these commodities are not included in the planned range of goods to be made available to the citizens, and the individual who wishes to be an adagio dancer or a magician will be similarly out of luck if such occupations have not been provided for in the economic plans.

Thus, it seems that the individual's occupational and consumption choices, though free within certain ranges, would on the whole be strictly limited under socialism. This conclusion is not acceptable to the socialists, who contend that the individual would actually have more freedom in these respects under socialism than under capitalism. In the latter system, there is a vast range of consumption choices available on the market, but most individuals have such small money incomes that their actual consumption choices are severely limited. Under socialism, the total range of consumption choices would be more restricted, but, with money income distributed rather evenly among individuals, each person would be able to purchase and consume virtually anything which planned production made available. Under capitalism, there is a wide range of occupations legally open to the individual workers, but each worker is actually able to qualify for only one occupation or for a very small number of occupations. Under socialism, the total number of occupations would be somewhat smaller, but the breaking down of certain environmental barriers to movement between the labor groups by means of education and training would permit each worker to qualify for a broader range of occupations than under capitalism.

In evaluating modern socialism as a proposed system we have been faced with imposing lists of advantages and disadvantages, of assets and liabilities. The socialists clearly have an advantage in supporting their ideal theoretical sys-

tem in comparison with our actually-operating capitalistic system. That is, a system which worked out exactly in accordance with the socialistic model would be regarded by many people as "better" than our actual capitalistic system. On the other hand, the ideal theoretical capitalistic system may well be regarded as superior to any socialistic system as such a system would probably work in practice. While it is clear that modern socialism affords at least a workable alternative to our capitalistic system, the question of just how well a socialistic system would actually operate in the United States in comparison with our existing system of capitalism cannot be answered accurately in advance. Apparently most Americans are anxious to postpone any attempt to change our system over to socialism—at least until some actually-operating socialistic economy is seen to function in a manner which convinces them of the practical superiority of the socialistic form of organization. For the present, perhaps the chief objection to socialism is that most of our people simply do not seem to want it.

Third War Loan Drive.—War production is generating incomes roughly equal in amount to that production. While the Government is spending far more than it is receiving in taxes and is faced with a deficit, the people of the country are receiving more income than they spend, because goods available for purchase are diminishing. . . . The fundamental task of war finance is to transfer this excess income from private to public use; to draw back into the Treasury out of the income created by our ever-expanding national production an amount equal to what the Government is spending. The best way to do this is by increasing taxes and the sale of War Bonds. To the extent that these two methods of rechanneling excess funds are used, pressure for an inflationary advance in prices of civilian goods can be avoided.—From *Federal Reserve Bulletin,* August, 1943.

Federal Tax Collections in Illinois.—According to a recent report of the Commissioner of Internal Revenue, in the fiscal year ended June 30, 1943, Illinois bore 8.41 per cent of the United States tax load, although the State contains only 5.98 per cent of the nation's population. Federal income taxes paid by Illinois residents amounted to $177.92 on a per capita basis.

Ration Banking

PAUL G. BUSEY
President, Busey's State Bank

BEFORE being put into operation, the Ration Banking Plan was carefully tested under operating conditions, and approved by the Comptroller of the Currency, the Federal Reserve System, the Federal Deposit Insurance Corporation, many state banking departments, the American Bankers Association, and numerous commercial banks.

As originally set up, it was the intention to operate the plan through Local War Price and Rationing Boards, who would receive coupons and issue certificates in their stead. Local boards, however, were not sufficiently staffed and equipped to perform this service. A source was needed which would combine accounting knowledge, administrative facilities, and integrity, to receive the deposits and handle the exchanges by check; consequently, commercial banks were chosen.

Under the original plan the retailer was supplied with gummed sheets on which he was supposed to stick his coupons, each variety on a separate sheet, pass the sheets on to his wholesaler in exchange for goods, or to the Ration Board in exchange for certificates, the certificate then passing to the wholesaler.

When it was decided to use the banking system instead, a basis of compensation to the banks was determined as follows:

For the first account opened for any depositor	$.30
For each additional account opened for the same depositor	.05
For each account carried on the books of the bank on the 15th of each month	.10
For each deposit made	.05
For each item included in the deposit (Each coupon sheet or stamp card is considered one item)	.005
For each ration check properly debited to an account	.04

Copies of forms are furnished to the banks, but each bank must furnish its supplies, including customers' checks, deposit slips, signature cards, etc., at its own expense.

Customers are required to open their ration accounts only in banks in which they carry their money accounts, except that if they carry no money bank account they may select whatever bank they wish. In these ration bank accounts they deposit coupons or other rationing authorizations. When buying rationed commodities the merchant draws ration checks against his ration bank account in favor of his supplier. The supplier then deposits in his own ration account the ration checks given him, and in turn draws ration checks as he purchases rationed goods from his supplier.

As originally set up, only coffee, gasoline, and sugar were rationed. Since then shoes, meats, fats, butter, processed foods, and fuel oil have been added. From time to time as other items are rationed, they will be included.

Not all merchants who receive coupons are required to open and maintain a rationing account. The requirements depend upon the volume of business transacted. Originally this requirement was for merchants with a total of goods sold in December, 1942, amounting to $5,000. In April, 1943, this was changed to cover merchants who sold $2,500 worth of coffee, sugar, processed foods, meats, and fats in December, 1942, or any month thereafter. No other merchants could open such accounts.

To open a ration account, signature cards are signed in duplicate, one card being mailed to the Office of Price Administration at least semi-monthly by the bank. If the applicant is a corporation, association, or similar organization, the bank is obliged to obtain a copy of a resolution authorizing the deposit and designating the persons empowered to sign checks. In the case of a partnership, a power of attorney giving the above information must be submitted. In case more than one ration account is carried, and a separate ration account must be opened for each rationed commodity, additional signature cards and resolutions are unnecessary.

In handling the transactions within the bank, a detailed procedure is necessary. The bank must have made out a ration deposit ticket in duplicate for each rationed commodity. Thus, a separate ticket must be made for meat or gasoline, etc. The teller stamps the duplicate deposit ticket and returns it to the depositor. In addition to stamps, coupons or ration checks, certificates, and acknowledgments are received in deposits.

Originally the instructions to banks were to burn or otherwise destroy coupons and stamps received in deposits twice a month, retaining however one-half-month's accumulation for subsequent inspection by the proper authorities. Rationed deposits and checks are handled within the banks much like other bank items, a separate ledger sheet or statement sheet, a separate check book, and separate books of duplicate deposit tickets being used for each rationing account. Thus a merchant may have four or five ration accounts with four or five check books. Ration checks are cleared through the banks in much the same manner as other checks, using clearing houses, the Federal Reserve System, and correspondent banks. Ration deposits and checks are posted each day as part of the regular routine work of the bank.

If ration checks which overdraw the depositor's account are received by a bank, the bank is instructed to charge them to his ration account and create an overdraft, communicating with the depositor to determine whether the overdraft is an error. Originally the instructions were to report the overdraft to the headquarters immediately, but

this has been revised to permit a semi-monthly report.

On the 15th of each month, a statistical report is required of the bank in duplicate, showing the total amount of ration checks paid and the total in ration bank accounts.

It is interesting from the standpoint of a student of banking to review the bulletins of banking instructions received during the past six months.

Jan. 14 Instruction on coffee rationing.
14 Instruction on sugar rationing.
14 Instruction on gasoline rationing.
23 Ration order 3A.

Feb. 4 Instruction regarding gasoline bulk coupons.
11 Regarding examination by State and Federal examiners of rationed coupons.
11 Instructions as to processed food ration banking.
19 Institutional and industrial users of ration books.
20 Statistical reports on sugar, gasoline, and coffee.
20 Changes in personnel.
27 Gasoline regulations.

Mar. 1 Bulletin #3. Envelopes may replace gummed sheets.
1 Shoe rationing program.
3 Memo on use of envelopes. Not more than 500 stamps in envelope. Show type, number of stamps, value and total, name and date. Cremate 90%. Bank not required to verify.
6 Details of meat rationing.
9 Details of shoe rationing.

Apr. 3 Change in depositor requirements.
6 Supplementary shoe rationing.
12 New plan of book rationing with stamps for use of small retailers.
Apr. 30 Bulletin #4. If reimbursement not sufficient for actual cost of handling, to be adjusted July 1. Cost of producing 140 million sheets a month precludes greater compensation at this time.

May 1 Transferability of ration checks by endorsement permitted.
8 Bulletin amending ration orders.
10 Sugar allowance for canning.
10 Instructions regarding gasoline bulk consumer.
21 Validity of sugar coupons #15 and #16.
21 Other than gas. Three types of envelopes to be furnished by O. P. A. #1 for 500 coupons or less. #2 and #3 bulk envelopes. Banks not required to verify.
25 Overdrafts in ration accounts. Only overdrafts not made up to be reported. Duplicate statistical report requirements discontinued.
25 Reimbursement schedule.

June 2 Information not related directly to banking.
2 Instructions to verify 3% of deposits of coupons from now on. All errors assumed by O. P. A.
2 Instructions for verification.
2 Instructions regarding fuel oil rationing.
10 Instruction as to stolen coupons.
23 Supplementary stamp validity date.
23 Bank memorandum.
23 No longer report bank overdrafts except semi-monthly.
25 Eliminate single letter "T" coupon.

July 3 Instructions as to sugar and coffee stamps.

From the list of bulletins given on the preceding page the student of banking can see that the work of handling ration banking within the bank is complicated by changes from time to time, and those upon whom rests the burden of handling these details feel that the procedure is as yet far from satisfactory. It is true that the compensation received by the banks is not commensurate with the work involved, but this task of administering the ration banking program is part of the contribution of these institutions toward the waging of total war.

Development of Substitutes for Imported Materials.—Billions of dollars are being spent and thousands of research workers engaged in developing synthetic and substitute materials for those formerly imported and no longer available because of military developments and shipping difficulties. It now appears reasonably certain that at the close of the war, the United States will find itself independent of the rest of the world for many raw materials which it formerly had to import. In order to establish old-time conditions, it is considered doubtful that plants for the production of these synthetic and substitute products will be abandoned and that their thousands of employees will be discharged to aid foreign producers. For this reason, it is believed that international trade in the postwar period will be nothing like that now envisaged by many government officials.

—From *The New York Times,* February 14, 1943

Contribution of Small Business.—The Department of Commerce reports that small business produces one-third of the total dollar value of all goods and services in this country. Such firms employ 45 per cent of all wage earners in manufacturing, wholesaling, retailing, and service industries. The existence of our thousands of smaller concerns affords opportunity for the exercise of private initiative without which our traditional system of free enterprise could not long continue.

Population Changes.—The Bureau of the Census recently reported that, in spite of a record birth rate, the civilian population of the United States declined 3,100,000 between April 1, 1940 and March 1, 1943. Of the four geographical areas, only the West showed a gain for the thirty-five-month period, although twelve states and the District of Columbia reported increases.

Comments on Quality Control

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The use of statistical methods for quality control has, year by year, grown more widespread. The results have proved the value of these methods in saving time and money, as well as in providing precise knowledge of the quality level of the products inspected. An application of statistical mathematics to inspection procedures requires technical knowledge and a thorough understanding of both the possibilities and the limitations of the method. However, the endeavor to apply statistics to inspection has provided a new insight into quality control.

The broader aspects of statistical quality control show certain general trends of managerial policy and indicate some important new ideas which management will apply to inspection processes in the near future. Statistical quality control is a relatively new thing. It remains to be developed in a form applicable to factory inspection in general. Those now engaged in supervising inspection have the opportunity of contributing to the development of this new approach, which makes possible a *quantitative determination* of the quality level of a production process, and which provides a background for the understanding of all inspection problems.

In the recent past there has been a significant improvement in inspection techniques. Up to 1929, technical progress consisted largely of the use of improved instruments. Today the quality of instrument types is very high. Gage blocks, reed gages, dial indicators, and optical measuring instruments make possible accurate and consistent measurement of quality. Recording pyrometers and thermometers keep a permanent record of temperature variations. Metallographic analysis and X-rays permit tests for properties not otherwise visible. Enumeration of such testing devices could be indefinitely prolonged. Undoubtedly the near future will see many more.

What is the net result of this technical progress? For what purpose were these instruments developed? One object was to provide ways of measuring characteristics not otherwise discernible as, for example, the flaws in castings or the grain structure of steel. It is only by the use of X-rays and metallographic analysis that these properties can be checked, or flaws discovered.

From the point of view of the industrial engineer, the net result is the increased objectivity of test data. The machinist's micrometer is a delicate and accurate instrument —in the hands of a good man. A dial indicating gage is an accurate and consistent measuring device in the hands of a relatively inexperi-

enced girl. The use of gage blocks, photo-electric cells, thermometers, etc., is ultimately a means of getting objective data free from the personal equation—data which can be written down and relied upon. The advantage of modern inspection equipment lies in the general usefulness of the resulting information.

This is all to the good. The essence of scientific management as practiced today is to learn the facts and act on them. The first requirement of adequate inspection is to determine the real quality of the material and products inspected. Modern inspection instruments go a long way toward achieving this result. The data which instruments make available must, however, be selected and interpreted to tell the story of quality. How can the quality of the parts, assemblies, and products be defined objectively?

The chief obstacle to an accurate interpretation of the data which modern inspection equipment makes available is the vast number of parts, assemblies, and products which must be examined. The number of screws or pins which modern automatic equipment produces makes 100 per cent inspection impossible. Even if complete inspection is not impossible, it may be too expensive, even at the cost of some bad parts. Yet, if a maximum economy in the assembly of parts is to be achieved, and scrapped parts and time waste avoided, the screws and pins, as well as the other pieces, must be held to a definite set of tolerances. The problem of the inspection engineer is to insure the holding of the parts to tolerance.

The usual method is to collect the parts made and to measure a percentage of them. The use of good instruments insures that the measurements will be accurate. But what does a percentage of good in a sample mean in terms of the whole lot? The fact of the matter is, as consideration shows, *bad parts hide from inspection.* If 5,000 screws in a lot of 5,500 are good, the chances are somewhat against a 2 per cent inspection ever turning up a bad screw. While 500 bad screws in a lot of 5,500 may not be a prohibitive proportion, the real trouble is that it is not possible to tell, on the basis of a percentage inspection, just how many are bad. Some examples of random percentage sampling will show this. Assume a normal lot of 1,000:

Per cent bad in lot	*Number bad in lot*	*Sample size*	*Number in sample probably bad*	*Per cent bad in lot as indicated by sample*
2	20	10	0	0
2	20	200	3	1.5
2	20	500	9	1.8
10	100	10	0	0
10	100	20	1	5.0
20	200	10	1	10.0
20	200	500	99	19.8
1	10	200	1	0.5

The greater the sample size, the closer the number of bad in the sample comes to giving the true percentage of bad in the lot. These figures, which are derived from the theory of probability, indicate clearly that a percentage inspection to be good must be exhaustive. Unless a very large number of samples is taken, no definite information is available about the lot. In reality a rejection or acceptance on the basis of a small sample is of psychological importance only.

The pure mathematics of small samples seems to indicate that inspection departments should be abolished. This would be true if any inspection department operated on the basis of pure mathematics. Actually, of course, pure mathematics never gets a shoulder in the door of any inspection supervisor's office—luckily. No strictly *random* samples are taken, at least on the production line. Then how does the inspection procedure really operate?

In the first place, samples, however small, tend to be taken in chronological sequence. Thus the samples tend to indicate any variation in quality from time to time. A small sample is a much more sensitive indicator of variation in quality than it is of absolute quality. If a roving inspector is assigned the task of examining screws every hour as they come off the machine, a change in the quality will probably show up. Even a 2 per cent sample of a lot of 5,000 screws taken on successive days will tell more about the quality of screws than might be expected according to the theory of probability. This is because a lot which contains 20 per cent bad parts will normally show one bad in a sample of ten. If more than one occurs then something may be wrong—provided the samples were taken in succession.

In the second place, the inspectors know what causes the rounded shoulders of the screw, or the increase in length, or the defect in general; and they act to remedy the cause. Inspection is thus usually closely tied in with the process of production—is a part of production and aids as effectively in creating the article as the tools used in production.

In the third place, the mere fact of inspection puts pressure on the worker to maintain quality.

Very often these three factors which maintain quality are not used effectively. Then the inspection department begins to think of itself as a police force. When this happens antagonism develops in the production line. Roving inspectors and line inspection may be abolished by the production executives, and emphasis shifted to random samples which may not be in chronological order. The statements made previously as to the characteristics of small samples then apply. Moreover, when this happens, the psychological effect of inspection diminishes. The production head possibly refuses to accept a verdict as to a bad lot. He calls for a new sample, and the chances are in his favor—since bad parts hide—that the new sample will probably be good.

Elaborate listing of all inspection

procedures with instructions as to percentage of samples, etc., may actually have a negative effect on the efficiency of an inspection routine. Such listings may emphasize random sampling and the formalities of inspection procedures, thus destroying the real power of the system which lies in the closeness of the inspectors to the production line, and their ability (acquired by experience) to see and remedy a variation in quality at the source.

The same analysis may be applied to the inspection of incoming materials. When a purchase is made from an unknown firm, and the inspection is made on the basis of a "representative" sample, then little can be said about the lot. A random sample is a sample which is supposed to be representative of the lot. In a theoretical sense it is representative of the lot, but in a theoretical sense only. That is to say, a lot which has 5 per cent bad will show one bad in a sample of twenty. But what the inspection engineer often means when he says "representative" is that the one bad in the sample of ten indicates 100 bad in a lot of 1,000. This is never the case consistently in a random sample.

The reputation of a maker is a well-known basis for purchasing. From the statistical point of view this is easy to understand. The fact that a maker has a good reputation implies that continuous use of many products has shown a high quality level. This is 100 per cent inspection, and it means that, indirectly, much more is known than random samples tell us. It gives a basis for thinking that there is a definite quality level in the merchandise; and, so long as this is true, small samples can be used to ascertain whether there is variation from this level. If it is known that products have been running true to form, then deviation from this form will usually be apparent in the sample. This means that the samples are really not random, and also that they are not, as a matter of fact, "representative" of the lot. They are signals only and mean that a change in quality has occurred. The information thus derived from the samples confirms the reputation and past performance of the merchandise. This is why, again, actual inspection procedures work better than they theoretically should.

The theory of probability indicates, as the samples considered show, that small random samples do not and cannot give the desired information. When a small quantity of parts is tested without knowing something about them, the chances are always that they will seem to be better than they are. And, while this much can be said, it is not possible to tell with much exactness the true condition of the lot without actually testing a large number of the individual items.

In the case of the purchase of material or products from a new source, therefore, a large sample is imperative. On the other hand, although a large sample would indicate the quality of material or product, it is usually not feasible to take such a sample. Furthermore, such a sample must be taken with extreme

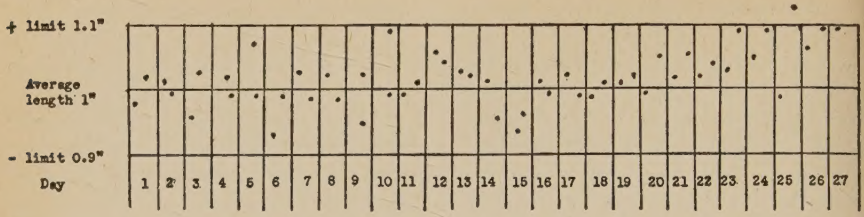
care in order that it be truly representative. A random small sample does not give the desired information; a large sample will not give this information unless it is random, and a random large sample is extremely difficult to choose. To mention merely one point, a random sample of a product must be chosen at random over the whole production time in question, otherwise it will be representative of quality only at a definite time. In practice a sample is purchased and tested, and the results of such tests are used as a basis for future purchases.

In theory also this is what should be done, with the addition of a definite technique for testing and evaluating the results. If a small sample is tested, another sample is tested later, and so on, eventually a large sample is accumulated which is random over a period of time and gives a true reading of quality. Without a definite technique for evaluating the series of small samples, this basis for finding out the true quality level is often lost. A series of samples analyzed statistically is adequate to tell the quality the manufacturer maintains, and to foretell a change in quality level before it becomes serious. Without the statistical techniques, a series of samples will probably not be evaluated accurately, because of the time interval between them and the general imperfections of human judgment.

To make use of the fact that a series of small samples compose a large sample it is necessary to compute for each of the small samples the theoretical limits within which it might have been expected to fall. This can be done on the basis of variation in the measurements of each piece sampled. The result is a set of limits defined by the sample itself. To be consistent with the first sample, the second sample should fall within these limits, and so on for each successive sample. This proves the consistency of the samples with each other. It is such self-consistency which permits the use of the whole set of samples as indicative of the quality of the material; this self-consistency also defines theoretically the representativeness of the set of samples. The only other way to define a sample as representative is to make it large, to make it cover the whole time-period of production, and to see that no factors are favored in its selection.

In a word, the use of small successive samples to give a true indication of the quality level of the product is the fundamental point in statistical quality control. In order to use this system it is necessary to perform certain mathematical analyses and to keep a record of the results. The nature of these analyses need not concern us here, except to say that they are very simple, involving no more than elementary arithmetic.

The results are of interest. When the analysis has been made for any particular measurement or quality, a graph can be prepared showing an average value and a set of limits. Thus, if an inspection is made of the length of a screw, for each sample there is an average length,



STATISTICAL CHART OF LENGTH OF SCREWS

Two samples of 10 screws each were taken each day.
Note trend to longer screws after 18th day.

and the variation which can be expressed graphically as three lines.

As more samples are taken, dots can be marked according to their average value. In each case the average is refigured, together with the variations. If the production line is operating consistently, the successive samples will be so scattered that the average will run through the center. However, if there is a variation in the quality level of the production line the dots representing the samples will tend gradually to one side, or begin to scatter erratically outside the limits.

Consider first the inspection of a part or assembly within the manufacturing plant. What does statistical inspection mean in terms of concrete operating procedures? In the first place, such samples as are taken are selected at certain time intervals, hourly, daily, etc. Furthermore, they are taken on the production line close to the actual production process. These two factors have already been noted as important in good inspection procedure; they are implicit in any inspection procedure, but in the statistical system they are absolutely essential. The statistical system makes direct use of the sensitivity of small samples to variation in quality, and of the effectiveness of immediate knowledge in stopping errors in production at the source. Moreover, it enables conditions to be remedied before they become serious, since the statistical method can foretell bad lots before they occur. The fact that the statistical method requires the close cooperation of the production and the inspection departments, and makes the inspection department an important factor in production (by enabling it to find mistakes before they happen) breaks down the policeman attitude of the inspection department. The result is a unified organization aimed not merely at production or quality, but at high quality of products. The absolutely definite nature of the results and the precise character and objectivity of the inspection data eliminate argument which might otherwise arise over the representativeness of the sample.

In emphasizing the close connection between production and inspection there is no implication that the

nspection department should be a part of the production department rom a managerial point of view. The reason why it should be managed independently is to be found in he special techniques and knowledge necessary in inspection, rather han in the belief that the only way o maintain quality is to have the nspection supervisor report directly o the plant superintendent. It is rue that if the inspection methods re such as to preclude precise appraisal of quality, the inspection upervisor is not in a position to rgue effectively with the production head. If this is not the case, the rgument for separate responsibility n this ground falls flat. The special echniques and the importance of he job, however, seem to indicate eparate supervision.

The same statistical procedures as re used on the production line may e applied to the purchase of parts, roducts, and material from other nanufacturers. Small samples analyzed statistically indicate the quality level of the manufacturer as oon as they accumulate to a sizeble sample. Furthermore, they accurately define the quality level in erms of an average measurement, urface defect, or whatever standard s desired. By setting up graphs of he samples it is possible to predict eviations before they result in rections.

To carry the matter further, the se of statistical methods insures hat manufacturers who maintain a igh quality level are recognized nd rewarded by orders. It has been oted that bad parts hide; this is also true of bad products. A small sample does not tell the quality level of the product, but almost invariably is better than that level. Thus, small-sample analysis of the products of two manufacturers favors the one with the lower quality level. In most cases, his lots will meet the test of percentage inspection, yet the total number of bad parts, as discovered in use, will be larger. This fact means greater loss to the purchaser and possibly greater profit to the manufacturer, since presumably the manufacturing methods which produce lower quality products would be less costly. When the statistical system is used, the true quality level is soon discovered. The better manufacturer is rewarded, and the expense of buying defective products eliminated.

Improved methods arise from a definitive and precise formulation of vague knowledge. The case of statistical inspection is no different in this respect from anything else. Practical inspection has always been based on experience with the general run of the product, experience which enabled the inspector to sense when the quality level was declining. The small sample has in general been used in practice as an index of the state of quality, rather than as a precise formulation of the quality level. What statistical analysis does is to formulate this knowledge in a precise way. Thus inspection procedures can be formulated exactly and inexperienced employees used in carrying out the inspection routine. The statistical system makes

sure that the small sample is used as an index; in addition it makes it possible to state on paper what the quality level is. Whereas a good inspector knows in a general way what the quality level of a production line is and when it declines, this knowledge is a matter of judgment, and a gradual decline over a long period may escape his notice. When the quality level is stated as a figure, any deviation is at once obvious.

Judgment and experience are of course necessary, but the more these can be reserved for fundamental matters and the less they have to be used in routine procedures, the more will industrial engineering become an effective discipline.

Wartime Gold Production.—While world gold production has decreased materially during the war, available reports indicate that production outside the Soviet Union probably exceeds $750,000,000 a year, or considerably more than half the prewar total of some $1,250,000,000. The largest part of this output comes from South Africa, where production has declined by only about 10 per cent, according to latest figures.

The destination of this new gold production is a good deal of a mystery, because of the paucity of data available under wartime conditions. American gold holdings have declined on balance by almost $400,000,000 this year, showing that the United States not only no longer retains any part of new gold production, but is selling to other countries much more than we import. South Africa is adding none of the gold she produces to her officially reported gold stocks, her gold holdings at the end of June showing a decline of $50,000,000 as compared with December, 1942. Moderate amounts of gold have been added to officially reported holdings of several Latin American and European neutral countries, but no really large acquisitions have been made public by them.

—From *Journal of Commerce* (New York), August 30, 1943

Wartime Immigration.—As a result of wartime travel restrictions only 104,842 aliens entered the United States in the past year. This was the smallest immigration to the United States since the Civil War year of 1862, when 91,985 aliens entered American ports. Of the aliens who entered this country last year, only 23,725 came with the intention of settling here permanently.